

# West 28<sup>th</sup> Street Substation

In support of  Service.

## Project Description/Goals

- MTA will be constructing an underground power substation for the 8th Avenue (A/C/E) Line on West 28th Street.
- This project is necessary to provide the additional power capacity to increase the number of trains per hour in the future and improve the reliability of the power supply along 8th Avenue. Reliable power is critical to the success of Communications-based Train Control (CBTC), currently being installed on the 8th Avenue Line between 59th Street and High Street in Brooklyn.
- MTA will advance an A+B procurement method for the construction of this project. The A+B method considers schedule, along with cost, to optimize and shorten the construction duration, minimizing impacts on the surrounding community.
- Estimated total construction cost: \$80 million
- Construction Duration: is anticipated to be 39 months, with approximately 24 months of construction at street level.

## What is a Traction Power Substation?

- A traction power substation converts AC electric power from ConEdison to the DC voltage required to supply the subway trains with enough power to function.
- NYC Transit has approximately 230 substations throughout all five boroughs. Substations are either beneath the street (below-grade) or in above the street (at/above-grade) buildings, in residential, commercial, and industrial areas.

## Why West 28th Street?

- The substation needs to be located within close proximity (ideally 300 feet, or less) of existing subway tracks, to minimize the distance from the transformer to the third rail power distribution system. Additionally, longer distance = additional manholes/more excavations, which = more disruption.
- Meets the power connection criteria identified in the traction power systems study for the needs of the 8<sup>th</sup> Avenue Line,
- West 28<sup>th</sup> Street has sufficient street width so that all work can be done in DOT right-of-way
- No buildings mid-block that would be impacted
- Minimal subsurface utility issues to navigate, minimizing disruptions to community
- Is set back from Penn South residential buildings, minimizing noise impacts that would be experienced in closer confines
- Because all work is in the right-of-way the location will not require temporary or permanent easements.

## Construction Impacts and Health Effects

- The MTA construction contract specifications require the contractor to prepare a Construction Noise Management Plan to comply with NYC Noise Code.
- The contractor will be required by contract to use vibration control measures.
- In addition, the contractor will need to comply with more stringent NYC Building Code Technical Policy and Procedure Notices (TPPN) #10/88 for protection from vibration for historic structures based on Penn South designation.
- Studies conducted for the MTA *on above ground substation* projects have shown that there are **no distinguishable differences in the EMF environment from field levels commonly experienced in any developed society.**
- ***EMF exposure from below ground substations is less common as the ground provides an extra barrier to EMF dispersion.***

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In support of **A C E** Service.

**West 28<sup>th</sup> Street Post -Construction Street Level Plan and Rendering**

